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Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A medical device lead connector system comprising:

(a) a connector header including a connector bore, the connector bore having ~~a first~~ an inner bore surface;

(b) ~~a first elongated insulated conductor and a lead having a lead body,~~
a plurality of elongated insulated conductors extending within the lead body between a plurality of lead electrodes at a lead body distal end [[:]] and a lead connector at a lead body proximal end,

the lead connector including:

~~a plurality~~ an array of lead connector pads wherein the pads are distributed circumferentially in an adjacent spaced apart relationship around a periphery of the lead connector,

~~and terminated proximally by a connector pin proximal of the array of lead connector pads to electrically engage the lead connector within the connector bore[[:]].~~

~~a first~~ the connector pin being coupled to one of the plurality of lead electrodes coupled to the connector pin via the first insulated conductor [[:]], and

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each of the lead connector pads being coupled to an individual one of the other of the plurality of lead electrodes

~~a plurality of electrodes, each electrode of the plurality of electrodes coupled to a corresponding connector pad of the plurality of connector pads via a one of the plurality of elongated insulated conductors; and~~

(c) an adaptor, comprising:

~~a~~ an insulating adaptor body having a proximal end and a distal end;

~~a second inner surface, the second inner surface forming a lumen within the adaptor body having an inner lumen surface extending from a proximal end to a distal end and dimensioned to receive the lead connector for relative rotational movement therein;~~

a connector ring extending circumferentially over a segment of an exterior surface of the adaptor body;

~~a~~ an electrical contact flange coupled to the connector ring and extending outward from through the insulating adaptor body into the lumen to project from the second inner lumen surface and within the lumen, the flange being dimensioned so as to be in registration with one of the lead connector pads at a time when the lead connector is inserted into the lumen of the adaptor body and rotated relative to the adaptor body to selectively engage any one of the plurality of connector pads when the connector is engaged within the lumen and the adaptor is rotated about an a longitudinal axis extending from the proximal end of the insulating adaptor body to the distal end of the insulating adaptor body; and

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~~an external surface wherein the insulating adaptor body is dimensioned to be received within to engage the first inner surface of the connector bore of the connector header and including a conductive surface electrically coupled to the flange to electrically engage the flange within the connector bore;~~

~~wherein, the selected one of the plurality of connector pads corresponds to a selected electrode of the plurality of lead electrodes; and~~

~~when the lead connector is engaged within the lumen of the adaptor, the connector pin extends outward from the proximal end of the adaptor.~~

2. (Currently Amended) The medical device lead connector system of claim 1, wherein the external surface configuration of the insulating adaptor body conforms to an industry standard.

3. (Currently Amended) The medical device lead connector system of claim 1, wherein, ~~when the lead connector is engaged within the lumen of the adaptor the~~ external surface of the adaptor body and the protruding connector pin of the lead connector conforms to an industry standard.

4. (Currently Amended) The medical device lead connector system of claim 1, wherein the external surface of the adaptor body further includes a set of sealing rings positioned proximal to the conductive surface.

5. (Currently Amended) The medical device lead connector system of claim 1, wherein the lead connector further includes a plurality of sealing rings positioned distal to the plurality of connector pads.

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6. (Currently Amended) The medical device lead connector system of claim 1, wherein the lead connector further includes a mechanical stop to engage the distal end of the adaptor body when the lead connector is fully inserted within the lumen of the adaptor body.

Claim 7. (Canceled)

8. (Currently Amended) The medical device lead connector system of claim 1, wherein the flange is a resilient force beam.

9. (Currently Amended) The medical device lead connector system of claim 1, wherein each connector pad of the ~~plurality of connector pads~~ includes a surface depression adapted to mate with the flange.

10. (Currently Amended) The medical device lead connector system of claim 1, wherein each connector pad of the ~~plurality of connector pads~~ includes a resilient protrusion adapted to mate with the flange.

11. (Currently Amended) The medical device lead connector system of claim 10, wherein the flange includes a surface depression to receive the resilient protrusion of any one of the plurality of connector pads.

12. (Currently Amended) A method for optimizing implantable medical device electrical stimulation therapy using ~~coupling a selected electrode of a lead from having a plurality of selectively active lead electrodes to an implantable medical device~~, comprising the steps of:

providing a lead connector at the proximal end of the lead, the lead connector including an array of individual, circumferentially

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distributed lead connector pads, and a connector pin proximal of the array of lead connector pads, wherein the connector pin is coupled to one of the plurality of lead electrodes and each of the individual, circumferentially distributed lead connector pads being coupled to an individual one of the other of the plurality of lead electrodes;

providing an adaptor, the adaptor comprising an insulating adaptor body having a proximal end and a distal end, a lumen within the adaptor body having an inner lumen surface extending from a proximal end to a distal end and dimensioned to receive the lead connector for relative rotational movement therein, a connector ring extending circumferentially over a segment of an exterior surface of the insulating adaptor body, and an electrical contact flange coupled to the connector ring and extending through the insulating adaptor body into the lumen to project from the inner lumen surface, the flange being dimensioned to be in registration with one of the individual, circumferentially distributed lead connector pads at a time when the lead connector is inserted into the lumen of the adaptor body and rotated relative to the adaptor body to align with any one of the plurality of lead connector pads;

inserting a connector of a lead within an the lead connector within the adaptor lumen; and

rotating the adaptor about an axis extending through the adaptor and aligning to selectively align the a flange of the adaptor in registration with one of the lead connector pads and thereby select the lead connector pad and thereby permit selective activation of one of the lead electrodes formed within a lumen of

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~~the adapter with a connector pad selected from a plurality of connector pads positioned along the connector, the selected connector pad corresponding to the selected electrode.~~

13. (Currently Amended) The method of claim 12, further comprising the step of inserting the adapter connector of the lead, inserted within the lumen of the adapter, into a connector header bore of ~~the~~ an implantable medical device to electrically couple the selected lead connector pad and to the implantable medical device ~~within the connector bore via the flange.~~